

## REMARKS

In the Office Action mailed March 13, 2007 the Examiner noted that claims 1-16 were pending, allowed claims 4, 5, 9, and 10, objected to claims 15-16, and rejected claims 1-3, 6-8, and 11-14. Claims 1, 4, 6, 9, 11, 12 and 15 have been amended, no claims have been canceled, no new claims have been added and, thus, in view of the forgoing claims 1-16 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections and objections are traversed below.

## OBJECTIONS

The Examiner indicated that claims 15 and 16 would be allowable if rewritten into independent form and thus has been done.

### REJECTIONS under 35 U.S.C. § 112

Claims 1, 6 and 11 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner states "producing continuous emission light waves" is not supported in the specification.' Claims 1, 6 and 11 have been amended to recite "by extracting longitudinal mode components of the optical sequence whose spectrum is expanded." Support for the amendment found on page 3 lines 7-12.

Claims 1-16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, as to claims 1, 4, 6 and 9, the Examiner states "the optical pulse sequence the spectrum" is not clear. We have amended claims 1, 4, 6 and 9 to recite "the optical pulse sequence, the spectrum."

Further, as regards claims 1, 4, 6, 9, 11 and 12, the Examiner states that "it is not clear if the 'optical splitting unit' is actually an optical unit that is separate and distinct from the pulse shaper (LC-SLM) or the same unit." With reference to Fig. 4, it is clear that diffraction gratings 30 and 34 are separate and distinct from LC-SLM 32.

Withdrawal of the rejections is respectfully requested.

### REJECTIONS under 35 U.S.C. § 102

Claims 1-3, 6-8 and 11 (the Examiner also provided comments about claims 12 and 14) stand rejected under 35 U.S.C. § 102(b) as anticipated by Watanabe, U.S. Patent App. No. 2002/0041618. Watanabe is directed to the removal of the noise component in a chirp, utilizing

the fact that the size of the chirp differs in a portion near the center of a slope and a portion near the peak and edge. This is in contrast to the present claims, where output of the light has an output power that is flat relative to the wavelength.

As regards claims 1, 6 and 12, Watanabe does not teach of “super Gaussian pulse of a third order or higher.” In particular, Watanabe paragraphs 46-50 do not teach or suggest that a super Gaussian pulse higher than the third order. Therefore, “Watanabe does not teach or suggest “an optical pulse shaping unit making a shape of an optical pulse output from said optical pulse light source into a super Gaussian pulse of a third order or higher,” as in claim 1.

Further, Watanabe paragraphs 110-112 do not teach that the input to the spectrum expanding unit is shaped optical pulses. Therefore, Watanabe does not teach or suggest “a spectrum expanding unit expanding a spectrum of an optical pulse sequence composed of shaped optical pulses,” as in claim 1.

Similar features are also emphasized by claims 6, 11 and 12. Therefore, claims 1, 6, 11 and 12 and the claims dependent therefrom are distinguishable from Watanabe.

As regards dependent claim 3, nothing in Watanabe teaches or suggests “said spectrum expanding unit expands the spectrum by using a highly nonlinear fiber or a holey fiber as a nonlinear medium.”

Claims 1, 6 and 11 stand rejected under 35 U.S.C. § 102(b) as anticipated by Javadi, U.S. Patent App. No. 2002/0150242. Javadi is a system and method for linking users to a secure database with holographic data. Paragraphs 0052-0058 discuss the use of Gaussian-shaped input pulse envelope. Nothing in Javadi teaches or suggest making a shape of an optical pulse into a super Gaussian pulse of the third order or higher. Therefore, Javadi does not teach or suggest “an optical pulse shaping unit making a shape of an optical pulse output from said optical pulse light source into a super Gaussian pulse of a third order or higher,” as in claim 1.

Further, the Examiner asserts that a “spectrum expanding unit” is taught by fiber optical transmission line 260 of Javadi. Optical transmission line 260 is a general optical fiber not non-linear fiber and therefore does not disclose “a spectrum expanding unit expanding a spectrum of an optical pulse sequence composed of shaped optical pulses.”

Further, nothing in Javadi teaches or suggests “an optical splitting unit splitting the optical pulse sequence, the spectrum of which is expanded into light beams of respective frequencies by extracting longitudinal mode components of the optical sequence whose spectrum is

expanded," as in amended claim 1.

Therefore, claims 1, 6 and 12 and the claims dependent therefrom are distinguishable from Javadi.

Withdrawal of the rejections is respectfully requested.

**SUMMARY**

It is submitted that the claims satisfy the requirements of 35 U.S.C. 112. It is also submitted that claims 1-16 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

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